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NEWS 2 MAY 01 New CAS web site launched  
NEWS 3 MAY 08 CA/CAPLUS Indian patent publication number format defined  
NEWS 4 MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display fields  
NEWS 5 MAY 21 BIOSIS reloaded and enhanced with archival data  
NEWS 6 MAY 21 TOXCENTER enhanced with BIOSIS reload  
NEWS 7 MAY 21 CA/CAPLUS enhanced with additional kind codes for German patents  
NEWS 8 MAY 22 CA/CAPLUS enhanced with IPC reclassification in Japanese patents  
NEWS 9 JUN 27 CA/CAPLUS enhanced with pre-1967 CAS Registry Numbers  
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NEWS 12 JUL 02 LEMBASE coverage updated  
NEWS 13 JUL 02 LMEADLINE coverage updated  
NEWS 14 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 15 JUL 02 CHEMCATS accession numbers revised  
NEWS 16 JUL 02 CA/CAPLUS enhanced with utility model patents from China  
NEWS 17 JUL 16 CAPLUS enhanced with French and German abstracts  
NEWS 18 JUL 18 CA/CAPLUS patent coverage enhanced  
NEWS 19 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification  
NEWS 20 JUL 30 USGENE now available on STN  
NEWS 21 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 22 AUG 06 BEILSTEIN updated with new compounds  
NEWS 23 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 24 AUG 13 CA/CAPLUS enhanced with additional kind codes for granted patents

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

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=> s fmoc and cyclization  
L1 732 FMOC AND CYCLIZATION

=> s l1 and (PNA or peptide nucleic)  
L2 5 L1 AND (PNA OR PEPTIDE NUCLEIC)

=> dup rem l2  
PROCESSING COMPLETED FOR L2  
L3 2 DUP REM L2 (3 DUPLICATES REMOVED)

=> d l3 bib ab 1-2

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1  
AN 2002:789715 CAPLUS  
DN 138:14173  
TI Continuous Solid-Phase Synthesis and Disulfide Cyclization of  
Peptide-PNA-Peptide Chimeras  
AU Tian, Xiaobing; Wickstrom, Eric  
CS Kimmel Cancer Center, Departments of Biochemistry & Molecular Pharmacology  
and Microbiology & Immunology, Thomas Jefferson University, Philadelphia,  
PA, 19107, USA  
SO Organic Letters (2002), 4(23), 4013-4016  
CODEN: ORLEF7; ISSN: 1523-7060  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 138:14173  
AB Chelator peptides were extended from the N-terminus of peptide  
nucleic acid (PNA) dodecamers, which in turn were  
extended from the N-termini of disulfide-bridged peptide ligand analogs,  
using Fmoc coupling for all residues. The cysteine thiols were  
cyclized on a solid support, either before or after PNA  
extension. This simplified synthetic approach might allow preparation of a  
variety of multi-peptide disulfide-bridged PNA chimeras.  
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2000:894845 CAPLUS  
DN 134:252622  
TI Chemical synthesis of cyclic peptide nucleic  
acid-peptide hybrids  
AU Planas, Marta; Bardaji, Eduard; Barany, George  
CS Department of Chemistry, University of Minnesota, MN, 55455, USA  
SO Peptides for the New Millennium, Proceedings of the American Peptide  
Symposium, 16th, Minneapolis, MN, United States, June 26-July 1, 1999

(2000), Meeting Date 1999, 786-787. Editor(s): Fields, Gregg B.; Tam, James P.; Barany, George. Publisher: Kluwer Academic Publishers, Dordrecht, Neth.

CODEN: 69ATHX

DT Conference

LA English

AB A symposium report. The cyclic peptide nucleic acid (PNA)-peptide hybrids were synthesized by first carrying out solid-phase synthesis of the linear sequences, followed by cyclization either while resin-bound, or in solution. A three-dimensional orthogonal Fmoc (9-fluorenylmethoxycarbonyl)/tert-Bu/allyl scheme was used to obtain the head-to-tail cyclic units.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 11:03:48 ON 15 AUG 2007)

FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT 11:04:07 ON 15 AUG 2007

L1 732 S FMOC AND CYCLIZATION  
L2 5 S L1 AND (PNA OR PEPTIDE NUCLEIC)  
L3 2 DUP REM L2 (3 DUPLICATES REMOVED)

=> s fmoc and (pna or peptide nucleic)

L4 243 FMOC AND (PNA OR PEPTIDE NUCLEIC)

=> s l4 and (piperidine and nmp)

L5 1 L4 AND (PIPERIDINE AND NMP)

=> d l5 bib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:231432 CAPLUS

DN 144:299344

TI Solid phase conjugation of complexing agents and targeting moieties

IN Syud, Faisal A.; Brogan, John B.; Kramer, Daniel Joshua

PA General Electric Company, USA

SO U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006058218	A1	20060316	US 2004-937323	20040910
PRAI	US 2004-937323		20040910		

OS MARPAT 144:299344

AB There is provided a technique for conjugating one or more complexing agents with a targeting moiety, such as natural amino acids, unnatural amino acids, peptides, peptide nucleic acids, nucleotides, and analogs and derivs. thereof. The one or more complexing agents are conjugated at one or more free amino groups of the targeting moiety while the moiety is attached to a solid substrate. Thus, peptide nucleic acids (PNA) was synthesized using solid-phase synthesis techniques with Fmoc protecting groups on the terminal amino groups of the PNA monomers. 5-(4-Fmoc-aminoethyl-3,5-dimethoxyphenoxy)valeric acid-MBHA resin was chosen as the polymer substrate. The side chains of the PNA monomers was protected using Bhoc groups. The Fmoc-protected amine on the resin may be deprotected by washing with 20 % piperidine in DMF. To conjugate 1,4,8,11-Tetraazacyclotetradecane-

N,N',N'',N'''-tetraacetic acid (TETA) with the terminal amino group of the resin-bound PNA, a premixed solution of TETA-t-Bu3 dissolved in N-methylpyrrolidinone (NMP), excess equivalent of O-(7-Azabenzotriazol-1-yl)-N,N,N',N'-tetramethyluronium hexafluorophosphate (HATU), and N,N-diisopropylethylamine (DIEA) in pyridine was added and the reaction was carried out.

=> s l4 and (piperidine or nmp)

L6 6 L4 AND (PIPERIDINE OR NMP)

=> dup rem l6

PROCESSING COMPLETED FOR L6

L7 6 DUP REM L6 (0 DUPLICATES REMOVED)

=> s l7 not l5

L8 5 L7 NOT L5

=> d l8 bib ab 1-5

L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:470499 CAPLUS

DN 139:53311

TI Preparation of novel functional group-modified peptide nucleic acids (PNA) and method for their preparation

IN Ikeda, Kazufumi; Sotozaki, Madoka

PA Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003171396	A	20030620	JP 2002-121667	20020424
	US 2003229201	A1	20031211	US 2003-422285	20030424
	US 6809190	B2	20041026		
	JP 2006158400	A	20060622	JP 2005-371734	20051226
PRAI	JP 2001-285191	A	20010919		
	JP 2002-121667	A	20020424		

OS CASREACT 139:53311; MARPAT 139:53311

AB A new method for preparation of PNA oligomers introduced with mols. possessing various functionalities such as optical functionality, membrane permeability, organ selectivity, antiseptic activity, and mol. recognition at the desired position on the backbone of PNA oligomers is provided, which is superior in cost performance and enables rapid introduction of functional mols. A functional group-modified PNA oligomer is prepared by reaction of protected PNA monomers each containing adenine, guanine, cytosine, or thymine, e.g. Fmoc -NHCH2CH2N(COCH2X)CH2CO2H or BocNHCH2CH2N(COCH2X)CH2CO2H (I; X = nucleic acid base) with Fmoc- $\omega$ -amino-acid-Boc- PNA-OH of formula BocNHCH2CH2N[CO(CH2)nNH-Fmoc]CH2CO2H (II; wherein n = 1-15), introducing a functional mol. having free carboxylic acid to the resulting PNA oligomer, and deprotection. PNA oligomers are useful for gene therapy. Thus, a PNA oligomer, H2N-G-A-T-pMR-G-A-C-G-C-CONH2 (pMR = Q; A, C, G, T = PNA monomer unit), was prepared by the Boc solid phase method which involved sequential coupling of PNA monomer units I (X = thymine, cytosine, adenine, and guanine) and II (n = 1) on a MBHA resin. When II (n = 1) was condensed, Fmoc was removed by treatment with piperidine before coupling thymine PNA monomer unit and then p-Methyl red (optical functional mol.) was condensed using HBTU and diisopropylethylamine, followed by coupling thymine, adenine, and guanine PNA monomer units and deprotecting Z group and simultaneously cleaving the PNA oligomer from the solid support.

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2001:409049 CAPLUS  
DN 135:167010  
TI A Convenient Solid-Phase Method for Synthesis of 3'-Conjugates of  
Oligonucleotides  
AU Stetsenko, Dmitry A.; Gait, Michael J.  
CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, CB2  
2QH, UK  
SO Bioconjugate Chemistry (2001), 12(4), 576-586  
CODEN: BCCHEs; ISSN: 1043-1802  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 135:167010  
AB We present a new procedure for the preparation of 3'-conjugates of  
oligonucleotides through solid-phase synthesis. A suitable universal  
solid support was readily prepared using a series of peptide-like coupling  
reactions to incorporate first a spacer and then an L-homoserine branching  
unit. The N- $\alpha$ -position of the homoserine carries an Fmoc  
protecting group that is removed by treatment with piperidine to  
liberate an amino group suitable for attachment of the conjugate (e.g.,  
small organic mol., fluorescent group, cholesterol, biotin, amino acid, etc.)  
or for assembly of a short peptide. The side-chain hydroxyl group of the  
homoserine carries a trityl protecting group. After TFA deprotection, the  
hydroxyl group acts as the site for oligonucleotide assembly. An addnl.  
spacer, such as aminohexanoyl, may be incorporated easily between the  
conjugate mol. and the oligonucleotide. A number of examples of synthesis of  
3'-conjugates of oligonucleotides and their analogs are described that  
involve standard automated oligonucleotide assembly and use of com. available  
materials. The linkage between oligonucleotide and 3'-conjugate is  
chirally pure and is stable to conventional ammonia treatment used for  
oligonucleotide deprotection and release from the solid support. The  
homoserine-functionalized solid support system represents a simple and  
universal route to 3'-conjugates of oligonucleotides and their derivs.  
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:567007 CAPLUS  
DN 131:322895  
TI Use of the Dithiasuccinoyl (Dts) Amino Protecting Group for Solid-Phase  
Synthesis of Protected Peptide Nucleic Acid (PNA) Oligomers  
AU Planas, Marta; Bardaji, Eduard; Jensen, Knud J.; Barany, George  
CS Department of Chemistry, University of Minnesota, Minneapolis, MN, 55455,  
USA  
SO Journal of Organic Chemistry (1999), 64(20), 7281-7289  
CODEN: JOCEAH; ISSN: 0022-3263  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 131:322895  
AB Peptide nucleic acid (PNA) oligomers replace  
the oligonucleotide backbone of DNA with an achiral and neutral  
poly[N-(2-aminoethyl)glycine] backbone, and the four natural nucleobases  
are attached through methylene carbonyl linkages to the glycine nitrogens.  
The present work describes the efficient conversion of  
N $\alpha$ -Boc/side-chain Z-protected PNA monomers to the  
corresponding derivs. protected by the thiolizable N $\alpha$ -dithia-  
succinoyl (Dts) function. After acidolytic removal of Boc, treatment with  
bis(ethoxy-thiocarbonyl) sulfide gave the N $\alpha$ -ethoxy-thiocarbonyl  
(Etc) derivs., which were silylated at the  $\alpha$ -carboxyl and converted  
to the heterocycle by reaction with (chloro-carbonyl)sulfonyl chloride.  
Net yields of homogeneous monomers were 71-78%. Conditions in the

solid-phase mode for thiolytic removal of the Dts group, and for coupling of protected monomers, have been studied extensively and optimized. A protocol featuring (i) Dts removal with dithiothreitol (DTT) (0.5 M) in acetic acid (HOAc) (0.5 M)-CH<sub>2</sub>Cl<sub>2</sub> (2 + 8 min); (ii) short neutralization with N,N-diisopropyl-ethylamine (DIEA)-CH<sub>2</sub>Cl<sub>2</sub> (1:19, 1 + 2 min); and (iii) coupling mediated by HBTU-DIEA (3:1) in N-methyl-2-pyrrolidinone (NMP) (3 h) was applied to the solid-phase synthesis of Dts-T4-Gly-NH<sub>2</sub>, Dts-G(Z)-G(Z)-T-A(Z)-Gly-NH<sub>2</sub>, Dts-A(Z)-T-C(Z)-G(Z)-Gly-NH<sub>2</sub>, and Dts-G(Z)-C(Z)-A(Z)-T-Gly-NH<sub>2</sub>. The indicated protected PNA derivs. were released from the support, and their structures were verified by mass spectrometry.

RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1995:994427 CAPLUS  
DN 124:87804  
TI Peptide nucleic acid synthesis using a base labile amino protecting group.  
IN Breipohl, Gerhard Dr; Uhlmann, Eugen Dr; Knolle, Jochen Dr  
PA Hoechst A.-G., Germany  
SO Eur. Pat. Appl., 31 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 672701	A1	19950920	EP 1995-103319	19950308
	EP 672701	B1	19990728		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	DE 4408533	A1	19950928	DE 1994-4408533	19940314
	AT 182602	T	19990815	AT 1995-103319	19950308
	ES 2136755	T3	19991201	ES 1995-103319	19950308
	FI 9501129	A	19950915	FI 1995-1129	19950310
	AU 9514800	A	19950921	AU 1995-14800	19950310
	AU 683714	B2	19971120		
	CA 2144473	A1	19950915	CA 1995-2144473	19950313
	NO 9500958	A	19950915	NO 1995-958	19950313
	NO 321035	B1	20060306		
	JP 07291909	A	19951107	JP 1995-54641	19950314
	US 6121418	A	20000919	US 1997-967197	19971029
	US 6316595	B1	20011113	US 2000-495457	20000201
PRAI	DE 1994-4408533	A	19940314		
	US 1995-402844	B1	19950313		
	US 1997-967197	A3	19971029		
AB	RAK[NHCH <sub>2</sub> CH <sub>2</sub> N(COCH <sub>2</sub> B)CH <sub>2</sub> CO]nQlQl (R = H, alkanoyl, alkoxycarbonyl, cycloalkanoyl, aroyl, heteroaroyl, group which promotes intracellular uptake or interacts with target nucleic acids; A, Q = amino acid residue; Ql = OH, amino; B = nucleobase or prodrug form thereof; l = 0-20; n = 1-50), were prepared by solid phase synthesis. Thus, H-[Aeg(T)] <sub>8</sub> -Lys-NH <sub>2</sub> [Aeg(T) = N-(2-aminoethyl)-N-[(1-thymine)acetyl]glycyl] was prepared by coupling of FMOC-Lys(BOC)-OH and FMOC-Aeg(T)-OH (preparation given) on 5-(FMOC-amino-4-methoxybenzyl)-2,4-dimethoxyphenylpropionic acid-derivatized aminomethylpolystyrene resin using an activator solution of PyBOP (PyBOP = benzotriazolyl-1-oxytripyrrolidiniophosphonium hexafluorophosphate) in DMF, NEM (N-ethylmorpholine) in DMF as base for activation, and 20% piperidine in DMF for deprotection.				

L8 ANSWER 5 OF 5 MEDLINE on STN  
AN 2002229543 MEDLINE  
DN PubMed ID: 11966434  
TI Parallel synthesis of PNA-peptide conjugate libraries.  
AU Awasthi Satish Kumar; Nielsen Peter E

CS Center for Biomolecular Recognition, IMBG, Biochemistry B, The Panum  
Institute, University of Copenhagen, Blegdamsvej 3c, Copenhagen N, DK  
2200, Denmark.

SO Combinatorial chemistry & high throughput screening, (2002 May) Vol. 5,  
No. 3, pp. 253-9.  
Journal code: 9810948. ISSN: 1386-2073.

CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)  
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LA English

FS Priority Journals

EM 200206

ED Entered STN: 23 Apr 2002  
Last Updated on STN: 5 Jun 2002  
Entered Medline: 4 Jun 2002

AB An optimized semi-automatic protocol for parallel synthesis of up to 96  
peptide nucleic acids (PNA) or PNA  
-peptide conjugates using Boc-protection strategy has been developed using  
a robotic system. The approach is illustrated by synthesizing PNA  
and PNA-peptide libraries varying between 15 and 27 amino acid  
units. The peptides (NLS (nuclear localization signal) or Tat-peptide)  
were attached to N-terminus of the PNA. The method was found to  
be far superior to that based on the SPOT/Fmoc protocol by which  
PNA oligomers are synthesized on a modified cellulose membrane.  
On a 0.5 micromole scale the method typically yielded 2 mg product of 90%  
purity by HPLC/MALDI-TOF analysis. This approach is suitable for  
screening of a large number of PNA and/or peptide sequences for  
biochemical and biological studies.

=> d his

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FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT 11:04:07 ON 15 AUG  
2007

L1	732 S FMOC AND CYCLIZATION
L2	5 S L1 AND (PNA OR PEPTIDE NUCLEIC)
L3	2 DUP REM L2 (3 DUPLICATES REMOVED)
L4	243 S FMOC AND (PNA OR PEPTIDE NUCLEIC)
L5	1 S L4 AND (PIPERIDINE AND NMP)
L6	6 S L4 AND (PIPERIDINE OR NMP)
L7	6 DUP REM L6 (0 DUPLICATES REMOVED)
L8	5 S L7 NOT L5

=> log hold

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FULL ESTIMATED COST	60.57	60.78
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.46	-5.46

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STN INTERNATIONAL SESSION SUSPENDED AT 11:12:52 ON 15 AUG 2007

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5667	piperidine same fmoc	US-PGPUB; USPAT	ADJ	ON	2007/08/15 10:57
L2	2934	piperidine same fmoc same (minute or "min." or "mins." or min or mins)	US-PGPUB; USPAT	ADJ	ON	2007/08/15 10:57
L3	199	piperidine same fmoc same ("2 minute" or "2 min" or "2 mins")	US-PGPUB; USPAT	ADJ	ON	2007/08/15 11:00
L4	15	piperidine same fmoc same ("two minute" or "two min" or "two mins")	US-PGPUB; USPAT	ADJ	ON	2007/08/15 11:00
L5	41	l3 and pna	US-PGPUB; USPAT	ADJ	ON	2007/08/15 11:00



US-PAT-NO: 5223400

DOCUMENT-IDENTIFIER: US 5223400 A

TITLE: Immunoassay method for determining the specificity  
of binding of a monoclonal antibody to an antigen

----- KWIC -----

Detailed Description Text - DETX (27):

Overlapping hexapeptides were synthesized on polyethylene pins as described earlier (Geysen, H. M. et al. supra). The peptides were assembled on the pins in the C-to-N terminus direction using 9-fluorenylmethyloxycarbonyl (Fmoc) protected amino acids. Briefly, the plastic pins were arranged on polypropylene block supports in a pattern suitable for soaking the tip of each pin into individual well of 96-well polypropylene plates. The pins were prederivatized with a non-detachable 15-atom long spacer ending with a Fmoc-b-alanine group. All steps in the synthesis were performed at room temperature. The pin blocks were initially soaked for 30 minutes in a 20% (v/v) piperidine/DMF bath to remove the Fmoc group generating a free terminal amino group. The pins were then cycled through the following steps: DMF washes (2 times; 2 minutes), methanol washes (3 times, 2 minutes), the pins were air-dried for 15 minutes, soaked in DMF (5 minutes) and blotted gently with tissue paper. The preformed active esters (oxobenzotriazine esters for serine and threonine; pentafluorophenyl esters for all other amino acids) of Fmoc amino acids (30 mM) were then dissolved in DMF containing 1-hydroxybenzotriazole (30 mM). The solutions were then dispensed immediately in the appropriate wells of 96-well polypropylene plates. The coupling step was initiated by placing the tip of the pins in their respective wells. The pin blocks and the polypropylene plates were carefully placed in sealed plastic trays and the coupling reactions were left to proceed overnight. The Fmoc deprotection and subsequent steps were then repeated until all hexapeptides were completed. The final Fmoc group on the completed peptides was removed as described above and the resulting free amino group was acetylated (DMF: acetic anhydride: diisopropylethylamine 50:5:1 (v/v/v); 90 minutes). The side-chain protecting groups of all peptides were simultaneously cleaved by soaking the pins in trifluoroacetic acid:phenol:ethanedithiol 95:2.5:2.5 (v/v/v) for 4

hours. The pins were successively washed with dichloromethane (twice for 2 minutes), neutralized with 5% DIEA/DCM (twice for 5 minutes), followed by single dichloromethane wash (5 minutes), air dried (15 minutes), wetted in water for 2 minutes, and soaked in methanol overnight. Remaining traces of solvent were evaporated under vacuum and the blocks were stored in plastic containers at room temperature in the presence of dessicant. Amino acid analysis was performed on ten pins. The peptide substitution per pin ranged in value from 2 to 4 nanomoles.

Other Reference Publication - OREF (1):  
Geysen et al. PNAS 81:3998-4002 (1984).

	U	1	Document ID	Issue Date	Pages
1	X	X	US 20070065949 A1	20070322	65
2	X	X	US 20070055048 A1	20070308	9
3	X	X	US 20070026429 A1	20070201	42
4	X	X	US 20060281670 A1	20061214	56
5	X	X	US 20060223759 A1	20061005	300
6	X	X	US 20060035217 A1	20060216	44
7	X		US 20050255491 A1	20051117	101
8	X		US 20050170376 A1	20050804	214
9	X		US 20040245450 A1	20041209	65
10	X		US 20040180412 A1	20040916	214
11	X		US 20040092736 A1	20040513	73
12	X		US 20040044219 A1	20040304	9
13	X		US 20040034191 A1	20040219	41
14	X		US 20030185890 A1	20031002	40
15	X	X	US 20020025401 A1	20020228	38

	Title	Current OR	Current XRef
1	Method and apparatus for desorption and ionization of analytes	436/173	
2	Process for supported phase synthesis	530/333	536/25.3; 536/55.3
3	BINARY PROBE AND CLAMP COMPOSITION AND METHODS FOR TARGET HYBRIDIZATION DETECTION	435/6	536/24.3
4	Compositions and methods for modulating angiogenesis	514/9	514/12; 514/15
5	Substituted 1,2-ethylenediamines, Methods for Preparing Them and Uses Thereof	514/18	530/331
6	BINARY PROBE AND CLAMP COMPOSITION.	435/6	536/24.1
7	Small molecule and peptide arrays and uses thereof	435/6	436/518
8	Evolving new molecular function	435/6	435/91.2
9	Method and apparatus for desorption and ionization of analytes	250/281	
10	Evolving new molecular function	435/91.2	435/6
11	Collections of compounds	540/569	435/7.1
12	Probe for analysis of nucleic acids	546/268.4	546/270.1; 546/271.7; 546/273.4; 546/277.4
13	Novel peptide-conjugated oligomeric compounds	530/322	
14	Compositions and methods for polynucleotide delivery	424/484	514/44; 514/8; 530/324; 530/325; 530/326; 530/327
15	Optical storage using materials comprising chromophore oligomers which can undergo cycloaddition	428/64.4	369/47.5

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1		Hutchens; T. William et al.							
2		Cool; Vincent et al.							
3		Livak; Kenneth J. et al.							
4		Bresnick; Emery H. et al.							
5		Eickmeier; Christian et al.							
6		Livak; Kenneth J. et al.							
7		Lee, Frank D. et al.							
8		Liu, David R. et al.							
9		Hutchens, T. William et al.							
10		Liu, David R. et al.							
11		Thurston, David Edwin et al.							
12		Sandstrom, Jennie et al.							
13		Manoharan, Muthiah et al.							
14		Zuckermann, Ronald N. et al.							
15		Berg, Rolf et al.							

	Image Doc. Displayed	PT
1	US 20070065949	
2	US 20070055048	
3	US 20070026429	
4	US 20060281670	
5	US 20060223759	
6	US 20060035217	
7	US 20050255491	
8	US 20050170376	
9	US 20040245450	
10	US 20040180412	
11	US 20040092736	
12	US 20040044219	
13	US 20040034191	
14	US 20030185890	
15	US 20020025401	

	U	1	Document ID	Issue Date	Pages
16		X	US 20010029035 A1	20011011	20
17	X	X	US 7252827 B1	20070807	49
18	X	X	US 7214384 B2	20070508	36
19	X	X	US 7135185 B1	20061114	49
20	X	X	US 7122549 B2	20061017	109

	Title	Current OR	Current XRef
16	Oligonucleotide conjugates	435/69.4	536/23.5
17	Conserved motif of hepatitis C virus E2/NS1 region	424/189.1	424/185.1; 424/186.1; 424/192.1; 424/193.1; 424/194.1; 424/196.11; 424/199.1; 424/201.1; 424/204.1; 424/225.1; 424/228.1; 514/12; 514/2; 530/323; 530/324; 530/402; 530/403; 530/826
18	Lipid-conjugated polyamide compounds	424/450	524/728; 552/502; 552/544; 554/35; 554/36; 554/37; 554/79
19	Conserved motif of hepatitis C virus E2/NS1 region	424/228.1	424/178.1; 424/182.1; 424/183.1; 424/189.1; 424/192.1; 424/193.1; 424/196.11; 424/199.1; 424/236.1; 514/12; 530/324; 530/403; 530/826
20	Saframycins, analogues and uses thereof	514/250	544/342



	Retrieval Classif	Inventor	S	C	P	2	3	4	5
16		Eisenhut, Michael et al.	X						
17		Weiner; Amy J. et al.							
18		Zuckermann; Ronald N. et al.							
19		Weiner; Amy J. et al.							
20		Myers; Andrew G. et al.							

	Image Doc. Displayed	PT
16	US 20010029035	
17	US 7252827	
18	US 7214384	
19	US 7135185	
20	US 7122549	

	U	1	Document ID	Issue Date	Pages
21	X	X	US 7098303 B1	20060829	49
22	X	X	US 6962984 B2	20051108	63
23			US 6878805 B2	20050412	48
24	X		US 6809099 B2	20041026	115
25			US 6692907 B1	20040217	48
26			US 6608192 B1	20030819	91

	Title	Current OR	Current XRef
21	Conserved motif of hepatitis C virus E2/NS1 region	530/324	424/185.1; 424/186.1; 424/189.1; 424/192.1; 424/193.1; 424/196.11; 424/197.11; 424/201.1; 424/204.1; 424/228.1; 424/238.1; 530/300; 530/329; 530/350; 530/403; 530/806; 530/826
22	IgA nephropathy-related DNA	536/23.1	436/6; 536/23.5; 536/24.5; 549/515
23	Peptide-conjugated oligomeric compounds	530/327	530/322; 530/328; 530/345; 536/23.1
24	Saframycins, analogues and uses thereof	514/250	544/342
25	Conserved motif of hepatitis C virus E2/NS1 region	435/5	435/7.1; 435/7.2; 435/7.92; 435/7.95; 436/501; 436/518; 436/536; 436/543; 436/820; 436/87; 530/300; 530/324; 530/826
26	Collections of compounds	540/496	

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
21		Weiner; Amy J. et al.							
22		Ishiwata; Tetsuyoshi et al.							
23		Manoharan; Muthiah et al.	X						
24		Myers; Andrew G. et al.							
25		Weiner; Amy J. et al.	X						
26		Thurston; David Edwin et al.	X						

	Image Doc. Displayed	PT
21	US 7098303	
22	US 6962984	
23	US 6878805	
24	US 6809099	
25	US 6692907	
26	US 6608192	

	U	1	Document ID	Issue Date	Pages
27	X		US 6572881 B1	20030603	37
28	X		US 6569450 B1	20030527	37
29	X	X	US 6468986 B1	20021022	50
30	X	X	US 6376655 B1	20020423	101
31	X	X	US 6346375 B1	20020212	246
32	X	X	US 6297370 B1	20011002	77
33	X	X	US 6251433 B1	20010626	49

	Title	Current OR	Current XRef
27	Lipid-conjugated polyamide compounds and related compositions and methods thereof	424/450	524/728; 552/502; 552/544; 554/35; 554/36; 554/37; 554/79
28	Lipid-conjugated polyamide compounds and related compositions and methods thereof	424/450	524/728; 552/502; 552/544; 554/35; 554/36; 554/37; 554/79
29	Compositions and methods for polynucleotide delivery	514/44	424/450; 424/486; 435/320.1; 435/325; 435/455; 435/91.4
30	Physically functional materials	534/573	430/1; 430/2; 524/190; 527/207; 534/829; 534/854; 534/DIG.3
31	NANBV diagnostics and vaccines	435/5	424/189.1; 424/228.1; 530/324; 530/325; 530/326; 530/327; 530/350
32	HCV genomic sequences for diagnostics and therapeutics	536/24.3	435/6; 536/23.1
33	Polycationic polymers	424/486	424/450; 435/320.1; 525/420; 525/54.1; 530/300; 530/333



	Retrieval Classif	Inventor	S	C	P	2	3	4	5
27		Zuckermann; Ronald N. et al.							
28		Zuckermann; Ronald N. et al.							
29		Zuckermann; Ronald N. et al.							
30		Berg; Rolf Henrik et al.							
31		Chien; David Y.							
32		Cha; Tai-An et al.							
33		Zuckermann; Ronald N. et al.							

	Image Doc. Displayed	PT
27	US 6572881	
28	US 6569450	
29	US 6468986	
30	US 6376655	
31	US 6346375	
32	US 6297370	
33	US 6251433	

	U	1	Document ID	Issue Date	Pages
34	X	X	US 6232522 B1	20010515	63
35	X	X	US 6190864 B1	20010220	76
36		X	US 6117974 A	20000912	36
37		X	US 6090912 A	20000718	65
38	X	X	US 5840485 A	19981124	63
39		X	US 5770687 A	19980623	37
40	X	X	US 5731285 A	19980324	9

	Title	Current OR	Current XRef
34	Non-human animal model for systemic lupus erythematosus	800/9	435/325; 435/335; 435/352; 435/355; 435/375; 435/7.2; 514/2; 530/387.1; 530/387.2; 530/403; 800/11
35	HCV genomic sequences for diagnostics and therapeutics	435/6	536/23.1; 536/24.3
36	Libraries of backbone-cyclized peptidomimetics	530/317	436/501; 530/333
37	Topologically segregated, encoded solid phase libraries comprising linkers having an enzymatically susceptible bond	530/300	435/212; 435/213; 436/518; 436/523; 436/528; 436/531; 530/304; 530/334; 530/402; 530/407
38	Topologically segregated, encoded solid phase libraries	435/6	435/7.1; 435/DIG.22; 435/DIG.34; 435/DIG.35; 435/DIG.38; 436/518; 530/300; 530/323; 536/23.1
39	Conformationally constrained backbone cyclized somatostatin analogs	530/311	530/317; 530/328
40	Tachiquinine antagonist tricyclic compounds, preparation of same and pharmaceutical compositions containing such compounds	514/10	514/11; 514/9; 530/317; 530/318

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
34		Harley; John B. et al.							
35		Cha; Tai-An, et al.							
36		Gilon; Chaim et al.	X						
37		Lebl; Michal et al.	X						
38		Lebl; Michal et al.							
39		Hornik; Vered et al.	X						
40		Pavone; Vincenzo et al.							

	Image Doc. Displayed	PT
34	US 6232522	
35	US 6190864	
36	US 6117974	
37	US 6090912	
38	US 5840485	
39	US 5770687	
40	US 5731285	

	U	1	Document ID	Issue Date	Pages
41		X	US 5223400 A	19930629	14

	Title	Current OR	Current XRef
41	Immunoassay method for determining the specificity of binding of a monoclonal antibody to an antigen	435/7.93	435/5; 435/7.1



	Retrieval Classif	Inventor	S	C	P	2	3	4	5
41		Ling; Victor et al.	X						

	Image Doc. Displayed	PT
41	US 5223400	